REMARKS

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 20-0100.

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Respectfully submitted,

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Redline Version

United States Patent Application

for

SYSTEM FOR PLAYING MULTIPLE VERSIONS OF AN AUDIOVISUAL PRODUCTION FROM MULTIPLE DIRECTORS

TO THE COMMISSIONER OF PATENTS AND TRADEMARKS:

David V. Clayton, a citizen of the United States, whose post office address is 2329 West

4175 South, Salt Lake City, Utah 84119, prays that letters patent be granted to him as inventor of

a **SYSTEM FOR PLAYING MULTIPLE VERSIONS OF AN AUDIOVISUAL**

PRODUCTION FROM MULTIPLE DIRECTORS as set forth in the following specification.

The Field of the Invention

The present invention relates to audio-visual control and playback systems. Specifically, there is a system that allows for an original audiovisual data file to be modified by other masking data files to create a new combined data file for viewing.

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Background of the Invention

Examples of patents related to the present invention, each of which are herein incorporated by reference for their supporting teachings, are as follows:

U.S. 5,574,567 to Cookson et al. teaches an optical disk that contains PG and R-rated versions of the same motion picture. To minimize redundant storage of data, three types of video data blocks are provided in the same track, in an interleaved fashion. A-type blocks contain material unique to version A. B-type blocks contain material unique to B. C-type blocks contain material common to both. A series of codes and pointers included in each block allow play of all common blocks, play of all A or B blocks depending on which version has been selected, and skipping over the blocks that contain data unique to the unselected version. Play of adult-rated versions are automatically prevented if a parental lock option in the player has been keyed on. The disk may contain special software for identifying multiple versions of the same material where the selection criterion is one other than a rating.

U.S. 4,750,213 to Novak teaches of an improved method and system for the editing of unwanted content from transmitted program material. The system may be operated manually or automatically and its program recognition means may be positioned either locally at the controlled receiver or in a remote location. The system also has expanded editing capability to allow coordinated control of accessory devices and may be programmed without the necessity of

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an initial reception of unwanted content at the controlled receiver. It also simplifies and improves the reliability of previously disclosed methods for automatic program identification.

U.S. 4,872,151 to Smith teaches of a compact disc having digitally encoded, reproducible data recorded in tracks on a playing side and having an editing device for storing order of playing

5   data to control the sequence in which the tracks are played. The editing device can be on the nonplaying side of the compact disc. A compact disc reproduction system, specially equipped to play discs having editing devices thereon, has a read and write head for reading order of play data from the editing device and for selectively encoding the editing device with order of play data. An internal memory stores order of play data in the disc player. Alternatively, the editing

10   device can be a separate time from the compact disc, to be inserted in a reader on the reproduction system. Another preferred compact disc player plays conventional discs loaded therein by scanning each disc to receive data for identifying the disc. The identifying data can be the number of tracks and the duration of each track on the playing side of the disc. Alternatively, it can be an identification code inscribed on the disc surface. This disc identification data is

15   compared with identification data stored in a memory to determine whether order of play data has already been stored for the disc. Upon detection of a match, a central controller looks up the order of play data assigned for the disc and commences play according to the preprogrammed sequence.

U.S. 4,754,342 to Duffy teaches of a virtual memory system for a video editor that

20   permits edited material from discrete takes to be electronically spliced in real time to form edited scenes. Typically, a plurality of cameras take film of originally acted scenes, either simultaneously from different angles or sequentially of differing takes of the same scene material replayed by skilled film actors. The film material is thereafter recorded from all uncut takes to a

random access memory, preferably a DRAW laser video disk. An intelligent interface, preferably a microprocessor, connects at least two and preferably three laser disk heads for reading the video frames of the same uncut takes. Each disk head is provided with and reads the identical disk material containing identical unedited takes. An intelligent interface addresses a

5   video disk head to randomly access the uncut takes and cause playing at controlled speeds forwardly, backwardly or still frame. A controlling computer addresses the intelligent interface and maintains and immediately updates a frame address list of edited takes including the first frame address of each take, and the last frame address of each take. All takes are maintained in the specified serial order of the edited scene. For immediate review at any time of an edited

10   scene, the controlling computer commands the intelligent interface to play the current edited take and positions one player on the first frame of the next sequential take, this frame being the first frame of the next take in forward motion or the last frame of the previous take for reverse motion.

U.S. 4,766,541 to Bleich et al. teaches of a video game that has a real-time interactive

15   video disk game play background generation system. The disk player incorporates track skipping capability that is under the direct control of the game processor, on a frame-by-frame basis, whereby substantially instantaneous jumps to alternate video scenes can be effected in response to changing game play. Video scene data is stored on the disk in horizontally compressed format. A video expander or scroller effectively stretches the compressed video

20   from the disk by a factor of two and selects, under game processor control, one frame width, or one-half the expanded background scene, for display. A color programmable read only memory (PROM) having at least two pre-programmed color pallets is provided to redefine color relationships of game symbols stored in read only memory (ROM) thereby reducing the storage

of redundant game symbol data in this ROM.

U.S. 4,685,003 teaches of a video composition method and apparatus for selecting segments from image source material that is stored on multiple storage media and denote serially connected sequences of the segments to thereby form a program sequence. The equipment inputs source material, records the source material on the storage media, and further segments the source material as it is being input. An A/D converter digitizes frames of the source material, as the source material is being input, and each segment has associated therewith at least on digitized frame. The apparatus further has a plurality of pictorial display monitors arranged in an ordered array for providing a visual presentation of video labels selected from the digitized frames, the video labels, in sequence, representing a sequence of the video segments. An operator control circuitry is operative with the stored digitized frames and, in combination with the composing control circuitry, selectively supplies each pictorial display monitor, while the source material is being input, with electrical data signals representing a selected one of the sequence of labels.

Problem with the Background Art

Although the background art teaches many ways for a movie producer to create several versions of his/her own film, there is no teaching of a system, device or method for allowing a third person to display a ~~modify~~modified version of the original film without permanently changing the original film. Additionally, the prior art requires all of the changes to be located on the same data file (or DVD), instead of allowing for independent sources of data files to be mixed with or masked over the original data file to create a new film version.

Summary of the Invention

It is therefore a feature of the present invention to provide an audiovisual control and playback systems. Specifically, there is a system that allows for an original audiovisual data file to be modified by a third party movie producer by creating masking data files to create a new modified data file for viewing.

A further aspect of the invention is to provide a modifiable DVD display system, comprising a DVD, containing original movie data. A movie mask file, containing movie mask data that is used to modify the original movie data. There is also a playing means for playing the original DVD data while overlaying the movie mask data.

Yet, an additional feature of the invention is to provide a computer, used to play the original movie data from the DVD and to add the movie mask data to selected frames of the original movie.

Additionally, another feature of the preferred embodiment provides a player software program, loaded on the computer, used to combine the original movie data with the movie mask data.

Moreover, an important feature of the preferred embodiment is to provide a display device that is used to display a resulting movie after combining the original movie data and the movie mask data.

Another feature of the preferred embodiment is to provide a software library program, that holds movie mask data which needs to be placed on a specific frame of the original movie data.

ThereThus, there has thus been outlinesd, rather broadly, the more important features of

the invention so that the detailed description thereof that follows may be better understood, and so that the present contribution to the art may be better appreciated. Other features of the present invention will become clearer from the following detailed description of the invention, when taken in consideration with the accompanying drawings and claims, or may be learned by the

5   practice of the invention.

Brief Description of the Drawings

FIG. 1 is a schematic diagram of one version of the present invention.

FIG. 2 is a flow chart illustration of the operation of the schematic presented in Fig. 1.

10   It is noted that the drawings of the invention are not to scale. The drawings are merely schematic representations, not intended to portray specific parameters of the invention. The drawings are intended to depict only selected embodiments of the invention, and therefore should not be considered to be limiting the scope of the invention. The invention will be described with additional specificity and detail through the use of the accompanying drawings. Like numbering

15   between figures represents like elements.

Detailed Description of the Invention

Referring to FIG 1, there is a schematic diagram of one version of the preferred embodiment. Uniquely, playback system 10 includes a digital data (DD) 12 or digital storage

20   medium, which could be DVD (digital video disc), software, or any other type of audiovisual data file. For example, a DVD could be purchased from a brick and mortar facility or ordered over the web, and could even just be downloaded in a digital format over the web and not have to be burned onto a ~~computer~~compact disc (CD) or optical disk. Additionally, there is a movie

mask file (MMF) 14, also referred to as a masking file or masking data file. The purpose of the MMF 14 is to modify the DVD 12 as will be described hereafter. The movie mask file (14) can store both "location" masking data (11) and "A/V" masking data (13). Computer 16 contains software operating as player 18 and library 17. Computer 16 is coupled to receive the DVD 12

5   data and to couple it to the player 18. The player 18 is coupled to receive MMF 14 and digital data 12. Both MMF data, location 11 and A/V 13, are in communication to both the library 17 and player 18, depending upon the type of data, either A/V data or control data respectively. The library 17 stores the location masking data 11, and the A/V masking data 13. The player 18 uses the location masking data 11 to determine when and where to place the A/V data 13.

10   It is noted that, A/V data is typically the artistically created data (i.e., pictures or sounds) that are to be used to mask certain portions of the originally produced DVD A/V data. Whereas, control data, for example, may include data that describes where a particular piece of A/V data is to be stored in the library or from the remote data 19, what particular visual slide or frame that particular A/V data is to be place on, and where on the slide or frame the A/V data is to be

15   located.

The computer may receive other remote data (RD) 19, which is stored at a remote location because of its sheer size that is not capable of fitting on the MMF 14 medium. In the use of the remote data, the MMF 14, upon being downloaded, would instruct the computer to go to a remote site and download A/V data that will be used in playing a particular DVD 12.

20   One preferred embodiment for player 18, is to use a software program acting as a central processing unit to assemble the A/V production, which uses special library 17, the purpose of which will be described in the discussion of the operation of the invention hereinafter. Finally, the mixed output from the DVD 12 and MMF 14 are combined and displayed to an A/V display

or output device 20, video display or display, that is coupled to the computer 16 to receive modified A/V digital data 21 from the player 18.

Referring to FIG 2 there is a flow chart illustrating a basic operation of the preferred embodiment illustrated in FIG 1. Uniquely, the computer 16 is activated, thereby powering player 18 to start 30 operations. The first operation performed is to determine 32 if there is digital data 12 available for reading. If not, player 18 ends 34. If there is data, such as a DVD in the DVD slot of a computer (not shown), the player then identifies 36 if there is a matching MMF 14 available. If no matching MMF is available, the digital data 12 will be output 38 on output device 20. It is important to determine if there is a matching MMF 14 available because it prevents the odd chance that a DVD for the X-Files movie is matched with the X-Men MMF 14 data. Where there is a match, as will be in most cases, the player 18 will first create 40 the library 17 of data files from various data sources.

It is noted that the creation of a library is a critical step in the process of displaying the modified A/V production 21. It is important to have all data readily available in cache for easy masking of the digital data 12 just before the combined data 21 is output to the output device 20. However, not all of the data is easily available at the start of the playing of the movie, for example. Specifically, some of the movie mask data may be stored on the internet, referred to as remote data 19, because the size of the data files may be larger than what can be stored on a simple download of the MMF 14. Specific masking data will be stored on the MMF 14 and will simply be stored in cache or memory on the computer hardware and be ready for immediate use.

Once the library of data files is created in step 40, the system starts 42 playing the digital data 12. The first step in playing the player 18 is to go to 44 the next displayable frame. This may appear to be easy but encompasses many variations. The MMF 14 may instruct the player

18 to skip several frames of digital data 12, for example. In this case, the next displayable frame could be five minutes later in the digital data stream. It is the role of the MMF 14 to give the directions, or in the skipping example to give the next frame to go to; it is the role of the player to execute these directions.

5   Another example of a variation of the go to 44 step encompasses the insertion of additional frames. Specifically, MMF 14 instructs player 18 to insert sixty additional frames once frame ten thousandth, on the original digital data 12 is encountered. However, MMF 14 muchst also provide the address in the library 17 where those sixty new frames are located, and then direct the player 18 to return to frame ten thousand and one.

10   Once the correct frame is located, the actual data from the digital data 12 is decompressed 46, frame by frame. After an individual frame is decompressed, a decision is made whether masking is needed 46. Specifically, the MMF 14 gives information to the player 18 to decide if a frame does not need any modification 46, then the frame is ready for outputting 52 and is fed to the output device 20. However, if a modification is required, as dictated by the movie mask data

15   file 14, the player 18 will access 50 the library 17 to locate all masking data for that frame. In the next step 52, player 18 takes the masking data 52 and combines 52 it with the digital data 12 and outputs the combined digital data 21 to the output device 20. Finally, the decision is made whether this was the last frame of the A/V production, and if not, the step of go to 44 next frame is repeated, and if so, the process is ended 56.

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Remarks About the Preferred Embodiment

One skilled in the art of working with digital data as it relateds to audiovisual productions will realize many advantages from using this disclosure. For example, some movies are given an

"R" rating by the MAA (Movie Association of America) for only a few frames of the movie. If those frames of data could be skipped, then those movies could be viewed by viewers that find this material offensive. Also, for example, ~~in stead~~instead of skipping over the offensive material, it may even be possible to mask over the offensive audiovisual portions of the frames

5   without even skipping any of the frames. These are some of the advantages of the present embodiment.

Another advantage of the present embodiment is that third party audiovisual producers are now able to add their modifications to an existing A/V production. In other words, the directions provided by the MMF 14 do not have to be programmed by the original movie

10   producer. For example, it is ~~may be~~anticipated that a viewer will want to send in a picture (digital or otherwise) of themselves and commission a third party producer to edit the entire film to have the viewer's face masked over the original ~~actors~~actor's face.‒

It is even contemplated to have a single A/V production, ~~lets say~~for example the movie Titanic, have many third party directors make their own MMF 14. In this situation, for example,

15   movie viewers could be offered many MMFs 14 to select from for a specific movie. Specifically, this allows the movie viewer to select "Bob's" MMF 14 of Titanic because Bob's modifications make the movie funny. However, the movie viewer may want a more violent version of the movie, then the viewer may want to order one of "Jim's" MMF 14 versions. The point is, there can be hundreds of different third party directors that are selling their versions of

20   modifications, or their MMFs 14.

Uniquely, a new electronic business can be established around this concept. Specifically, by using a single web site, a particular DVD 12 could be ordered, and the particular style or third party director of MMF 14 can also be ordered from the same site. The ~~P~~player 18, being a

software program, can also be ordered from the same internet site. Additionally, third party directors can place their versions of a particular movie on the web site for potential viewers to purchase.

Another modification is to have third party artists (sound, image, characters etc.) ~~could~~
5 also place their particular data on the web site for other directors to use in creating their production, not necessarily a MMF 14 production but a full length production. Specifically, say a good clay-mation artist places a particular clay object on the web site and offers it for sale or use. A director may be looking for other characters to use in their modification of a particular audiovisual production. The director could use the clay object in his production and royalties
10 could be allocated to the artist based upon how many viewers purchase the director's production.

Yet another modification of the preferred embodiment is to offer commercial products for use to the directors. Specifically, the web site can have a location for businesses to pay directors for using their particular products in their productions. For example, a can of soda by COKE® is an item that can be selected by the director to be used in his production. If the director does use
15 the soda can with the companies label showing, then the director is paid a certain commission for each movie viewer to watch the movie production. Therefore, it is understood that this web site can be used as a means of exchanging goods and services as well as assisting directors in creating new audiovisual productions. ~~Thus, speeding up the old process of formal papers and agreements that often take weeks to finish.~~

20 Numerous modifications and alternative arrangements may be devised by those skilled in the art without departing from the spirit and scope of the present invention and the appended claims are intended to cover such modifications and arrangements. Thus, while the present invention has been described above with particularity and detail in connection with what is

presently deemed to be the most practical and preferred embodiments of the invention, it will be

apparent to those of ordinary skill in the art that numerous modifications, including, but not

limited to, variations in size, materials, shape, form, function, manner of operation, assembly,

and use may be made without departing from the principles and concepts set forth herein.

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Claims

What is claimed is:

1.   An audio/visual entertainment system, comprising:

a) a digital storage medium (12) that stores digital data;

5   b) a movie mask file (14) that stores both location masking data (11) and A/V masking data

(13);

c) a display device (20); and

d) a computing device (16), coupled to the display device, having:

    1) a player system that operates to combine the digital data and the A/V masking data

10   before being displayed on the display device; and

    2) a library that holds the A/V masking data before being used by the player system.

2.   The audio/visual entertainment system of claim 1, wherein the computing device is a

computer.

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3.   The audio/visual entertainment system of claim 2, wherein the library holds the location

data that is to be accessed by the computing device before the A/V masking data is to be used by

the player system.

20   4. A method of playing and audio/visual production, comprising:

a) providing a digital storage medium (12) that stores digital data;

b) providing a movie mask file (14) that stores both location masking data (11) and A/V

masking data (13);

c) providing a display device (20);

d) providing a computing device (16), coupled to the display device, having:

    1) a player system that operates to combine the digital data and the A/V masking data before being displayed on the display device; and

5   2) a library that holds the A/V masking data before being used by the player system; and

e) displaying a concurrent output of the digital data and the A/V masking data on the display device.

5. The method of claim 4, further comprising the step of determining (36) if the A/V masking

10   data matches the digital data before being combined in the player system.

6. The method of claim 5, further comprising the step of playing (38) the digital data without the A/V masking data if there is no A/V masking data or the A/V masking data does not match.

15   7. The method of claim 6, further comprising ~~start~~the step of playing (42) digital data after all information is loaded into a library ~~and there is~~with the digital data and the masking data.

8. The method of claim 7, further comprising going to a next displayable frame (44) of digital data and decompressing associated data therefrom.

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9. The method of claim 8, further comprising determining (48) whether there are modifications needed for a next frame by reading location masking data in the library.

10. The method of claim 9, further comprising accessing (50) the library for all masking data for the next frame.

11. The method of claim 10, further comprising combining (52) the digital data and masking data at the player.

12. The method of claim 11, further comprising outputting the digital data and masking data on the display device.

13. The method of claim 12, further comprising the step of determining (54) if the next frame is a last frame of the digital data and sequencing to a new next frame or ending play.

14. An audio/visual entertainment system, comprising:

a) digital storage means (12) for storing digital data;

b) mask storage means (14) for storing both location masking data and A/V masking data;

c) a display means (20), for displaying a combination of the digital data and the A/V masking data; and

d) a computing means (16), coupled to the display device, having:

1) playing means for controlling the combination of the digital data and the A/V masking data before being displayed on the display device; and

2) library means for holding the A/V masking data and the locations masking data before being used by the player system.

15. The device of claim 14, wherein the computing means is a computer.

16. A modifiable DVD display system, comprising:

a) a DVD, containing original movie data;

5 b) a movie mask file, containing movie mask data that is used to modify the original movie data;

and

c) playing means for playing the original DVD data while overlaying the movie mask data.

17. The system of claim 16, further comprising a computer, used to play the original movie data

10 from the DVD and to add the movie mask data to selected frames of the original movie.

18. The system of claim 17, further comprising a player software program, loaded on the

computer, used to combine the original movie data with the movie mask data.

15 19. The system of claim 18, further comprising a display device that is used to display a

resulting movie after combining the original movie data and the movie mask data.

20. The system of claim 19, further comprising a software library program, that holds movie

mask data which needs to be placed on a specific frame of the original movie data.

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ABSTRACT OF THE INVENTION

An audiovisual control and playback systems. Specifically, there is a system that allows for an original audiovisual data file to be modified by a third party movie producer by creating masking data files to create a new modified data file for viewing. A modifiable DVD display system, comprises a DVD, containing original movie data. A movie mask file, containing movie mask data that is used to modify the original movie data. There is also a playing means for playing the original DVD data while overlaying the movie mask data. A computer is used to play the original movie data from the DVD and to add the movie mask data to selected frames of the original movie. A player software program is loaded on the computer and is used to combine the original movie data with the movie mask data. A display device is used to display a resulting movie after combining the original movie data and the movie mask data. A software library program holds movie mask data which needs to be placed on a specific frame of the original movie data.